

REMARKS

This responds to the Advisory Action dated November 15, 2005. Claims 1, 7, 19, and 25 are amended; as a result claims 1-29 are pending in this application.

Reservation of the Right to Swear Behind References

Applicant maintains its right to swear behind any references which are cited in a rejection under 35 U.S.C. §102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

§102 Rejection of the Claims

Claims 1-29 were rejected under 35 USC § 102(e) as being anticipated by Kadous (U.S. 2001/0036235 A1, “Kadous”). To anticipate a claim, the reference must teach every element of the claim.¹ A claim in dependent form shall be construed to incorporate by reference all of the limitations of the claim to which it refers.²

Regarding claims 1-6:

Applicant cannot find in Kadous, among other things, any disclosure of “receiving an OFDM symbol from a communication channel, said OFDM symbol having a plurality of data subcarriers and a plurality of pilot symbols, and identifying subcarriers of interest, wherein the subcarriers of interest are a subset of the plurality of data subcarriers,”

as presently recited in independent claim 1 and incorporated into dependent claims 2-6.

Kadous describes multipl[ying] interpolation coefficient for each channel by the LS estimator to obtain final channel estimates.³ The Final Office Action dated 8/18/2006 (hereinafter, “Final Office Action”) states that herein every channel or subcarrier is considered as an interested subcarrier.⁴ However, claim 1 recites that only subcarriers of interest are identified. The patent application teaches that this allows, among other things, tracking of subcarriers

¹ M.P.E.P. § 2131.

² 35 U.S.C. § 112 ¶4.

³ Kadous ¶ 0032.

⁴ Final Office Action pg. 3.

assigned to the corresponding user.⁵ Thus, claim 1 recites that equalization coefficients are only generated for subcarriers of interest.

Additionally, Applicant cannot find in Kadous any disclosure of

“obtaining a first interpolation vector corresponding to a first subcarrier of interest from a plurality of stored interpolation vectors,”

as presently recited in independent claim 1 and incorporated into dependent claims 2-6. Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel,⁶ instead of storing a plurality of interpolation vectors.

Regarding claims 7-18:

Applicant cannot find in Kadous, among other things,

“means for acquiring a stored interpolation vector associated with a first subcarrier of interest, wherein the first subcarrier of interest is a subset of the plurality of subcarriers,”

as recited in independent claim 7 and incorporated into dependent claims 8-18. Kadous describes finding an interpolation coefficient for each transmitting antenna, and that the interpolator matrix M is then multiplied by an LS estimate for each transmitting antenna to determine the channel estimate for each channel.⁷

Regarding claims 19-24:

Applicant cannot find in Kadous, among other things,

a subcarrier tracking unit to track subcarriers of interest, wherein the subcarriers of interest are a subset of the plurality of subcarriers,

as presently recited in independent claim 19 and incorporated into dependent claims 20-24. Kadous describes multiplying interpolation coefficient for each channel by the LS estimator to obtain final channel estimates.⁸

Additionally, Applicant cannot find in Kadous,

⁵ Patent Application, pg. 13, lines 11-22 and Fig. 6.

⁶ Kadous, pg. 2 ¶ 0020.

⁷ Id.

⁸ Kadous ¶ 0032.

“an interpolation vector retrieval unit to retrieve an interpolation vector for each of said subcarriers of interest from a memory,”

as presently recited in independent claim 19 and incorporated into dependent claims 20-24. Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel.⁹

Regarding claims 25-29:

Applicant cannot find in Kadous, among other things,

“determining a set of subcarriers of interest from an OFDM symbol having a plurality of data subcarriers and a plurality of pilot symbols, wherein the set of subcarriers of interest is a subset of the plurality of data subcarriers,”

as presently recited in independent claim 25 and incorporated into dependent claims 26-29.

Kadous describes multiplying interpolation coefficient for each channel by the LS estimator to obtain final channel estimates.¹⁰

Additionally, Applicant cannot find in Kadous,

“obtaining a first interpolation vector corresponding to a first subcarrier of interest from a plurality of stored interpolation vectors,”

as presently recited in independent claim 25 and incorporated into dependent claims 26-29.

Kadous describes determining an interpolation coefficient from a series of estimations and calculations, and that a channel estimate is calculated for each channel,¹¹ instead of storing a plurality of interpolation vectors.

Applicant respectfully requests reconsideration and allowance of claims 1-29.

⁹ Kadous, pg. 2 ¶ 0020.

¹⁰ Kadous ¶ 0032.

¹¹ Kadous, pg. 2 ¶ 0020.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 21st day of February, 2006.

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